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Vol. 46. No. 6

JUNE 5th, 1945

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Special Articles This Month

South Australian News and Notes

Vegetable Culture

Pruning Apple Trees

Queensland News and Notes

Black Spot of Apples

Conference Reports

Goulburn Valley News and Notes

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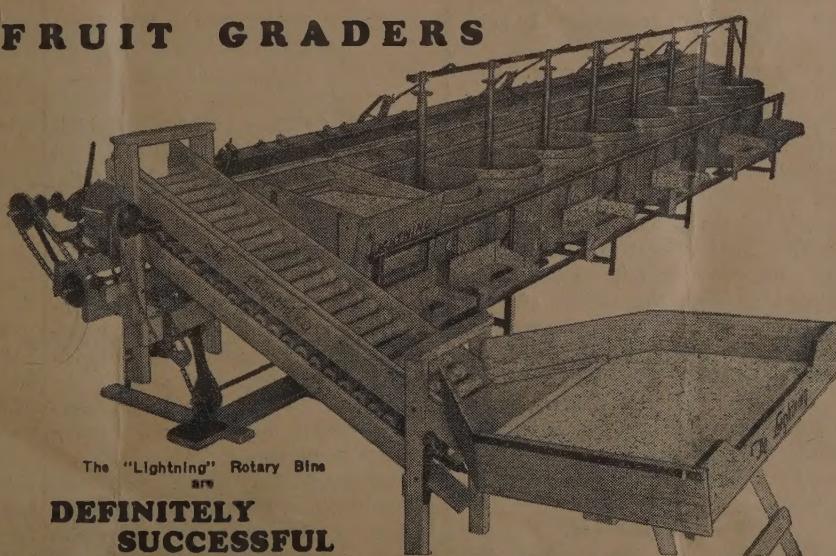
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Tasmanian News and Notes

FACTORIES ABSORB AVAILABLE CROPS — FERTILIZERS STILL SHORT — CASE MATERIAL PROBLEM — EXPORTS TO U.K. — GROWERS CONSIDER SUBSEQUENT EXPORT CONTROL — PEST AND DISEASE CONTROL.

(By Our Correspondent.)

Tasmania (20/5/45).

HARVESTING THE APPLE CROP in the north is practically complete, there being only a few Sturmers and Democrats left. Weather conditions continued favourable for picking and little time was lost.

The cool stores are well stocked and the fruit appears to be of good quality.

The weather in the south remains dry and milder than usual for the time of year, this has made picking quite pleasant, but Winter feed will be scarce and cover crops are almost stationary, and as Winter is now within sight, growth will not take place till Spring.

There are still a lot of Democrats and Sturmers to be picked; Demos were a heavy crop, and Sturmers constitute about a quarter of Tasmania's total crop. Codling moth was much less troublesome than usual, also canary fly, but red spider was troublesome on some varieties; Delicious and Sturmers seem to suffer very badly.

The various factories are working constantly and there will be practically no waste this season as the juice and Apple sauce orders can absorb the smaller sizes, leaving the larger fruit for peeling and shipment. Practically all midseason varieties will be cleaned up by June.

There were a lot of Democrats put into cool store and as the crop was heavy and fruit of medium size they should come out in satisfactory condition. Granny Smiths did not appear to me to be up to their usual quality.

As the trees are practically bare of leaves, pruning can begin earlier than last year. As far as I have seen the buds are well developed in spite of the dry Autumn.

The first shipment to Britain since the war began got away satisfactorily except for a little trouble with the waterside workers, which resulted in the cancellation of the next boat

scheduled to load. There is another ship expected to load in early June, the varieties being Democrats and Sturmers. I understand the quantity is 80,000. Owing to the cancellation of the second ship the total exports this season will be about 100,000 less than expected.

The position regarding supplies of fertilizers does not appear to have improved to any extent, and the trees are feeling the want rather severely.

The case material position is as bad as ever and so far the Government has not made any provision for supplies for the future. They have been asked repeatedly to reserve a suitable area, but so far have not done so. Tasmania's timber supplies are being cut out rapidly, and as this class of timber grows very slowly, the position will become very serious in a few years. Possibly, some types of timber in the tropical areas might be suitable for boxes.

Export Control Favoured.

There is a general feeling among growers in Tasmania that it is desirable that the Government continue control of fruit exports and guarantee a payable price. This should be possible if the Export Board sells on an F.O.B. basis direct to oversea buyers. Growers' committees are being formed all over the south of the State to consider post-war reconstruction of the industry and make recommendations. Probably a lot of them will be too local in their character to be of much use, but it will indicate the general line of thought, and let us hope there will be some degree of unity.

State Fruit Board.

The election for the southern district for the State Fruit Board resulted in Mr. D. Calvert being re-elected on the first count with a large surplus and Mr. R. H. Thomson re-elected on the cut up. Mr. R. Worsley, M.L.C., only being a few votes behind. The election is conducted on the preferential voting system. Mr.

Bulman was returned unopposed for the north.

Work in the berry fruit plantations is mostly well in hand. Spraying for fungus disease is becoming necessary in many places as the disease lightens the crop severely. Bordeaux mixture or strong lime sulphur in the dormant followed by weaker spraying in early Spring checks the trouble.

Gumming in Apricots and Cherries is becoming a serious menace, and unfortunately no successful treatment has been found yet. If it increases much more, neither will be a payable proposition.

A considerable quantity of Potatoes are to be grown this coming season by contract, also other vegetables for dehydration.

The egg position is not very promising at present and the rationing of fowl's food is causing concern and a lot of trouble to producers, especially the small producer.

The butter and milk position has not improved and the exceptionally dry Autumn has prevented the production of green fodder, so there is not likely to be any improvement in output for the next six months.

FRUIT WITH OSLO MEAL.

Children Welfare Demonstration.

At the Children's Welfare Exhibition held at the Melbourne Town Hall at the end of May, the value of the Oslo Meal was emphasised. There were exhibits and demonstrations by 40 organisations associated with child welfare. Commonwealth Food Control had an attractive exhibit demonstrating the vitamin content of vegetables. The Rationing Commission showed by posters and slogans the necessity of rationing as a war emergency—among other aspects, children were thus protected.

The Australian Apple and Pear Marketing Board showed standard varieties of Apples and Pears, with special emphasis on canning drying and Apple juice. A map of Australia was displayed showing Apples right round the coastline, and including a statement that 2,500,000 bushels of Apples were being used this season for processing—mainly for the fighting services. This represented a distance of about 15,000 miles if the

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Apples were placed side by side—sufficient to go right round the coastline of the mainland of Australia and Tasmania, also to New Zealand and back.

The Federal Citrus Council showed by means of attractive posters the vitamin C content of Oranges.

The Opportunity Club, which introduced the Oslo meal into Australia emphasise the importance of the inclusion of an Apple, or Orange, or other fruit with every meal.

FARM MACHINERY.

Machinery valued at £9,084,000 to aid Australian agriculture is to be turned out in 1945-46 under the programme sponsored by the Federal Department of Commerce and Agriculture, announces the Minister (Mr. Scully).

This is an increase of £2,084,000 over the current year's programme of £7,000,000, and is a further substantial increase on the 1943-44 sponsorship of £5,450,000. Annual peace-time output was valued at about £6,000,000.

The figures do not represent actual output. Production difficulties left the 1943-44 programme 40 per cent. below the target, but this year at least 75 per cent. of the programme is expected to be fulfilled.

Next year a bigger proportion of tillage and cultivating implements and headers will be made.

The department is continuing release of tractors. In the seven months ended January 31, 1945, releases totalled 4,102, of which about 36 per cent. were suitable for cereal production.

Mainly because of drought, fewer horses are available for farm work, and this has brought a rapid increase in the demand for tractors to replace them.

The coming year's programme provides for the output of 635 reapers and binders, 3,574 grain and cultivator drills, 10,000 dusting machines, 4,415 mowers, 2,539 scarifiers, 2,470 stripper harvesters and headers, 4,784 chaff and green-feed cutters, 3,157 hay rakes, 600 Potato planters, 1,200 Potato diggers, 16,000 brooders, 2,500 incubators, 16,360 windmills, 14,529 moulboard ploughs, 10,678 disc ploughs, 1,600 hay presses, and 20,700 milking machines.

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June 5th, 1945

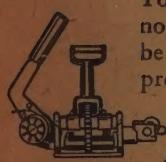
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cultural section of this Show always attracted entries from several of the Australian States. This section will be restored and be accommodated in the main pavilion.

CITRUS IN N.S.W.

Light Crops Expected.

Citrus crops in N.S.W. are likely to be only light this year, states Dr. H. J. Clynes, N.S.W., Director of Agric. Though rain in April benefited many coastal crops, there were extremely droughty conditions in the Murray district. On the Murrumbidgee Irrigation Areas, Navel crops, although they varied considerably, were for the most part poor. Valencia were sizing fairly well, but these crops were also patchy. Lemons were very poor.

PRIMARY PRODUCERS' DEFENCE LEAGUE

At the quarterly meeting of the Melbourne Metropolitan Council of the Fruitgrowers' Defence League, held on May 17, Cr. Hillhouse presided in the unavoidable absence of the President (Mr. J. H. Tainton).

Delegates were present from Diamond Valley, Templestowe, Doncaster, East Doncaster, East Burwood and Wantirna-Vermont.

The Secretary reported co-operation with Agric. Dept. Officers in securing a suitable site for the proposed Horticultural Research Station. Mr. F. M. Read, Chief Inspector of Horticulture, had visited the area with several of his officers, including Messrs. Rolfe and Greatorex, to discuss with growers improved methods of controlling root-borer, collar-rot, and brown-rot.

A recent conference with the Prices Branch re ceiling prices for fruit was reported on and the delegates were advised that the League would be represented at a deputation to Hon. N. A. Martin, Minister of Agric., on May 23, to put to him the growers' viewpoint regarding the proposed standardization of fruit trees supplied by nurserymen.

The Treasurer's financial statement showed a satisfactory balance.

It was decided to submit two matters of interest to growers to the League Conference in June.

Orchardists and Fruit Cool Stores' Association

PROBLEMS OF ORGANISATION — HIGHER PRIORITY SOUGHT FOR ORCHARDISTS — CEILING PRICES — WEIGHT OF FRUIT CASES — VICTORIAN FRUITGROWERS' COUNCIL — FRUIT TREE NURSERY STANDARDISATION — AN ORCHARD POLICY?

THE 27th ANNUAL CONFERENCE of the Orchardists' and

Fruit Cool Stores' Association of Victoria was held at Melbourne on May 31, 1945, Mr. D. W. Lechte presiding over a large and representative attendance.

Annual Report.

The annual report dealt with the Association's leadership in the industry, the efforts to create a Victorian Fruitgrowers' Council, the proposed Horticultural Research Station, and ceiling prices for Apples and Pears.

Official Opening.

In officially opening the Conference, the Hon. J. G. B. McDonald, Minister for Water Supply, emphasised the importance of primary producers in

wartime production and the part to be played in the settlement of post-war problems. He urged the importance of organisation and continued research.

Legal Case: Mr. F. C. Pyke reported that the case for increased compensation to growers would probably come before the Court on June 12. It was understood that whichever side lost, an appeal would be lodged: when the decision was finally made by the Courts it would be necessary to negotiate with the Board for the settlement of the various claims.

Apple and Pear Board.

A resolution was carried:

"That before any steps are taken by the Government for the revival of

the Australian Apple and Pear Board as constituted under the Apple and Pear Organisation Act of 1938, a poll of growers be taken to decide whether they favour this procedure, that an election for the members of the Board be held, and that the chairman be a grower or an officer of a bona fide growers' association."

Higher Priority Sought.

Mr. H. J. Willoughby (Tyabb) moved:

"That orchardists be put on a higher priority for supplies of artificial fertilizers."

The motion was amended to include other types of supplies and carried.

Ceiling Prices: It was reported that the discussion with officers of the Prices Branch had been of value. Delegates had been advised that it was the intention of the Prices Branch to leave the ceiling prices at the close of last year unchanged for the time being; it was unlikely that the rise in the ceiling price of 2/- per case would be granted for the balance of the season, and that there would be

small increases granted to cover storage costs for the remainder of the season.

The Prices Branch had stated that a contentious matter was that of the weight of fruit in cases. This matter had been one of the causes of the boycott by retailers on the Sydney market. It would probably be necessary to make test weighings at certain times and if it was found that the average weight was under 40 lb., that weight would be declared the average for the period and the ceiling price would be reduced accordingly. The case formerly used on the Sydney market was the Canadian case and it was maintained this held more than the average dump bushel case.

Victorian Fruitgrowers' Council: Mr. W. P. Mair detailed the procedure taken to create a state-wide fruitgrowers' organisation in Victoria, following the recent visit of the British Farmers' Delegation. Messrs. F. Moore and V. A. H. Clark, who had attended the Sydney Conference as observer delegates had reported on the necessity for a State-wide fruitgrowers' organisation in Victoria, to join with similar bodies in other States in forming an Australian organisation capable of being represented at the London Conference in October.

The original intention was to form a council from established growers' organisations: this idea had been departed from and it was now proposed that the basis be individual members, the State to be divided into zones, the organisations in these zones to invite growers to join.

Fruit Tree Standards: It was reported that at a recent conference the Minister for Agriculture, Mr. Martin, had stated it was the intention to introduce legislation in all the States to fix grade standards for nursery fruit trees.

Delegates generally appeared favourable to the proposal for the standardisation of nursery trees, but there was some opposition to the registration of nurserymen.

It was decided to discuss further details with the Supt. of Horticulture, Mr. J. M. Ward.

An Orchard Policy?

Prof. S. M. Wadham, Dean of Agriculture, Melbourne University, in dealing with the subject "Should there be an Australian Orchard policy," said in pre-war years many export growers had had a fairly rocky road and asked if growers were giving consideration to the question of over-production even when overseas shipping again became available? Would there be sufficient purchasing power overseas to absorb the quantity of Apples and Pears produced above the needs of the Australian market? Should there be a policy of restriction of areas for the growing of Apples and Pears? These were points which he asked growers to consider, or did they desire to go on as before and hope for the best?

Office-bearers.

Office-bearers were elected:—President, D. W. Lechte; Immediate Past President, J. H. Lang; Vice-Presidents, A. D. Finger, and E. R. Tully; executive members, D. J. Williamson and W. P. Mair; Representatives to Chamber of Agric., F. Petty; to Employers' Federation, W. P. Mair; to Standard Association, J. H. Lang; Auditor, J. G. Aird; Sec. and Treas., W. A. Stewart.

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tipping is a valuable factor in the control of powdery mildew.

In addition to the adoption of these methods of pruning, the thinning of the fruit should be attended to as soon as possible after the first natural shedding. By the following Winter the laterals retained—provided the crop has been kept to reasonable proportions—will mostly be carrying plenty of good plump fruit buds, and can then be headed in, allowing sufficient buds to set a crop commensurate with the strength of each lateral.

Under this system, due to the spur-thinning, perhaps followed by a fruit-thinning, the heavy "on" year crop has been kept down to reasonable proportions, whilst the laterals retained provide buds for the coming season's crop, normally the "off" season where there would have been little or nothing under the old system.

Trees Showing Only Light Blossom-bud Development.

In the case of a tree carrying only a light fruit bud development on the

spurs, these spurs can be left strictly alone, as every bud will be needed to make up a crop, and as in the normal course of events these spurs will be carrying a heavy bud show in the following Winter, then it is unnecessary to leave more than an odd, full length one-year-old lateral here and there where the spurs may happen to be a little on the scanty or weak side.

The remaining laterals can be stubbed back as previously explained, the object being to produce a good supply of strong laterals for the following Winter's pruning when, as already noted, the spurs will be carrying a full complement of buds.

Trees Showing a Medium Blossom-bud Development.

In the case of a tree showing a fair to medium show of buds, a light spur thinning can be given, taking out any weak subdivisions, but destroying in the process, as few buds as possible.

A limited number of the stronger and better placed laterals may be left and the remainder stubbed back as above.

After a season or two pruning along the lines indicated above it will generally be found that the trees will naturally approach somewhat to this third type of tree, which we might term the ideal, viz., a tree carrying a medium show of good well-developed buds partly on strong spurs and partly on strong evenly-spaced laterals each year.

From the three types of tree described it will be clear that, so far as pruning is concerned, trees should be treated as individuals, rather than en masse. In a block of Jonathan, any of the three types of bud development instanced may be seen in almost any year, hence the limitations of any inelastic method of pruning should be apparent to any thinking grower.

The question may be asked: "What is to be done with laterals which have carried their quota of fruit?" In the case of the Jonathan and similar type

of Apple, it is preferable always to shorten back the fruited laterals as much as possible.

Spur Bearing Types.

O WING TO A POPULAR BE-LIEF that lateral growth on spur-bearing varieties is just so much more or less waste, the usual method of pruning on countless places has been to shorten all such growth hard back—in many cases this shortening process amounts to little less than a severe stubbing—with the result that very often as the trees reach maturity they present the spectacle of main limbs, and a few secondaries perhaps, thickly covered with tight spur-clusters.

Why it should be necessary to crowd all spurs back in clusters as near to the limbs as possible is very hard to understand and, as a matter of fact, there are several good arguments against it. First and foremost is the fact that the hard stubbing necessary to achieve this effect is in reality, merely a slow way of weakening the tree; secondly, fruit in clusters is hard to keep free from pests and disease, due to the difficulty of obtaining a complete coverage by spray; and thirdly, such fruit usually shows considerable blemish where the fruits have touched one another or adjacent spurs. In addition, the matter of sunlight must be considered. Lack of sunlight will impair the efficacy of the leaves and in turn the carbohydrate supply for the growth of plant tissues is lessened.

Thus, crowding of spurs and subdivision of spurs into a confined space along the limbs is detrimental to the tree's continued growth and well-being, besides adversely affecting the colour of the fruit.

True spurs emanating from the limbs and smaller branches cannot, of course, be radically altered from their natural mode of growth, except that by judicious thinning when necessary, they can be prevented from becoming too thickly clustered and so weakened. The majority of spurs, and especially the stronger and more useful ones on all true spur-bearing types, tends to divide and multiply freely and this is a tendency which should be watched and carefully controlled by thinning out the weaker sections, particularly with such varieties as Delicious, Yates and Granny Smith Apples.

The fact should be kept in mind that all the growing points of an old spur have to be supplied with sap through a relatively small channel at the base of the spur, hence if allowed to divide and multiply unchecked, sooner or later many of these sub-sections become so weakened as to be useless from a fruiting point of view. This is the reason why in the thinning of spurs it is always these run-out and

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PRUNING APPLE TREES—Contd.

weakened sections which should be cut out, leaving the stronger portions to benefit by the extra, even if slight supply of sap.

There is no reason for forcing laterals, by constant hard cutting, to form additional clusters of close-packed spurs near the limbs. Such varieties as these, in the main, form buds fairly readily on shortened laterals, but it is not necessary to go to the extent of severe stubbing.

This fact should be taken advantage of to get as much of the crop as possible standing out from the main framework of the tree on good stout "fruiting arms." Apple trees carrying their fruit in this manner can be sprayed more quickly, and as effectively. The fruit gets more sunlight and is of better colour, and in addition, skin blemishes such as limb rubs are negligible compared to the skin blemishes on fruit which is borne on spur formation in close contact to the main limbs.

Furthermore, there is that most important factor to consider, the health of the tree. As already explained, good foliage is necessary for tree health and a tree covered with such arms naturally can carry a good deal more leaf-surface—to say nothing of the vastly-increased fruit-bearing surface. These fruit "arms" are built up by a reasonable shortening of laterals.

A Granny Smith, for instance, will produce fruit buds on laterals if given time—usually three years, against a Jonathan's two years—but usually only a few good buds are formed situated more towards the extremities; hence, as these buds can be obtained just as readily further back by judicious shortening, there is little point in leaving the laterals full length, but they should certainly not be cut back to mere stubs containing only weak basal buds.

The extent of the shortening depends on the strength and position of the lateral and some degree of individual judgment must be exercised here, but always several well-formed wood buds should be left on any new wood extension. It may take several years to form such arms and get them to the fruiting stage, but the benefits far outweigh this slight disadvantage, as once established on a

good vigorous tree, the arms, whilst they can continue to extend, give rise to a constant supply of all stages of developing buds. The result is that at no time is practically every spur-cluster carrying a quota of fruit, as can happen at times to a tree clothed entirely with natural and forced spurs, brought about by continued hard cutting. The result is that there is a much better prospect of spreading crops evenly over the years.

Thinning.

Thinning should be always regarded as a corollary of pruning, if the best results in crop regulation are to be obtained. Provided conditions are favourable, some amount of fruit thinning can be a decided help in regulating the size of fruit in most years, but it may not be necessary to indulge in any particularly heavy thinning of the fruit except when the trees set an abnormally heavy crop, such as usually happens following a comparative crop failure due to a severe frost or thrips invasion or other outside agency, during the previous year.

In concluding this statement on the influence of pruning methods on Apple production, it is desired again to stress that any system of pruning or thinning or combination of the two is unlikely to show to advantage in the face of any deficiency in tree health.

—N.S.W. Agric. Gazette.

ORANGE PRICE UNSATISFACTORY.

N.S.W. Growers Protest Against Reduction of Ceiling Price.

At a meeting of the N.S.W. Citrus Growers' executive, held in Sydney in the latter part of May, it was unanimously decided to protest against the reduction in the opening ceiling price of Oranges from 18/- to 16/-.

It was claimed that the navel crop was poor, and that the supply of Oranges would be very light during the early part of the season. In such circumstances it was felt that the crop position in N.S.W. had not been fully taken into account by the Prices Branch in fixing the opening ceiling.

The executive decided to make representations to the Commissioner on the subject.

West Australian News

APPLE GROWERS SEEK HIGHER PRICES FOR ACQUIRED FRUIT
— PROCESSING FACTORIES ACTIVE — VEGETABLE PRODUCTION & MARKETING — WHITE WAX SCALE ATTACKS CITRUS.

(By Our Correspondent.)

ORANGES AND APPLES have their dissatisfaction, and it was explained that, while prices were first based on the assumption that growers would not be required to harvest more than half of their crops, there was now almost a total call-up of all varieties. Mr. Parke explained that the Board could only pay on the assumption that prices would be the same as last year, whereupon the meeting agreed to recommend to the executive of the Association that a delegation of four growers be sent to Canberra to place the position of this State before the Minister, and specifically ask for an increase in price.

Tomatoes of good quality are in short supply and have been strictly rationed at the top rate. Fair quantities of small and green Tomatoes have come from the south-west, these have been sold down to 4/- a case.

The demand for Apples has resulted in rationing—an increase of 50 per cent. could easily have been absorbed. The President of the Fruit and Vegetable Retail Buyers' Protection Association (Mr. T. Houghton), says that the shortage of Apples has recently been most acute, market sales ceasing on some mornings as early as 7 o'clock. Weekend supplies have been particularly bad.

Dissatisfaction with the prices being paid to growers for acquired Apples led recently to one of the biggest meetings of fruitgrowers ever held in Donnybrook. The meeting was presided over by the chairman of the Donnybrook Fruitgrowers' Association (Mr. J. Cross) and was attended by the chairman (Mr. G. Parke), the State Superintendent (Mr. R. M. Carter) and the Secretary (Mr. A. Genfle) of the Apple and Pear Board. The Secretary of the Association (Mr. C. Moore) stated that at the Fruitgrowers' Conference in Perth in September last, a payment of an extra two units on delivered fruit, and one unit on all other fruit, was asked for, but despite repeated representations by the executive of the Association, no advice was to hand as to whether the Government was prepared to grant the request. Growers present were unanimous in

On the other hand, buyers are complaining of the retail prices of Apples and the matter has been brought before Parliament. Reply was: "Having regard to all circumstances, it is considered that the prices for early season's Apples and Pears have been reasonable, with some reductions since the opening of the market. As the season progresses and the full volume of the crop becomes available, further reductions in prices will occur."

Apple packing houses in Manjimup, Balingup and Greenbushes are now in operation, both the local Fruitgrowers' Co-operative Society and Messrs. Paterson operating sheds in Manjimup. Land girls have been sent to Geraldton to assist with Tomato picking. This year, instead of being quartered on the farms, the girls will live in a special hostel.

Although evidence from all sections of the fruit and vegetable industry, including growers, wholesalers and retailers, has been heard by the honorary committee recently appointed by the Minister for Agriculture to inquire into all matters concerning the marketing aspect, so far, despite wide publicity, there has been no response whatever from the consuming public.

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Scale," is reported by the Government Entomologist (Mr. C. Jenkins). The pest is gradually becoming established, but fortunately is not yet noted in most of the Orange-growing areas. The public is being asked to co-operate with the Department of Agriculture in order that the pest may be eradicated.

Average yield of Potatoes this season is about 5 or 6 tons per acre. Some 4,000 tons are expected on the markets by the end of the month, present rains giving indication that crops will be up to expectation. In the Denmark-Albany-Bornholm areas digging machines are being used.

Following on the damage caused by the February willy-willy to the Banana crop in Carnarvon, a plague of grasshoppers has now descended on the district. Banana trees, Date palms, citrus fruits and Grape vines have been stripped of their leaves, and young fruit has also been destroyed. The insects appear to be working in colonies, and some plantations have as yet escaped damage.

Owing to the delayed arrival of shipping at north-west ports, fruit and vegetables are again being forwarded to Onslow, Marole Bar and Port Hedland by air. Visiting a north-west station some months ago, the writer of these notes was told that, for a parcel containing 11 Carrots, 8 Oranges, 2 dozen small Apples and 4 lb. Peas, the freight amounted to no less than 29/-.

The Under Secretary for Agriculture (Mr. G. Baron Hay) recently emphasised the necessity for vegetable growers to make early application for the registration of all crops for the 1945-46 growing season, and reminded them that disposal of seed from unregistered crops is prohibited.

From 300,000 to 350,000 bushels of Apples will have been used in this State by the end of the year to make Apple by-products. At Donnybrook 50,000 gallons of Apple juice will have been delivered, while some 500 tons of dried Apples, and 300 tons of solid-pack Apples will be produced

by factories in Mount Barker, Perth, Donnybrook, Bridgetown and Greenmount.

Plaimar Ltd. will shortly commence the processing of citrus fruits, and is calling for Lemons, Oranges and Grapefruit.

The State executive of the Potato Growers' Association of Western Australia is advertising for a Secretary-Organiser at a salary of £400 a year. Applications are to be made to the local National Service Office.

WESTERN AUSTRALIA.

INTERESTING INFORMATION regarding Western Australian fruit crops in the April monthly report from Mr. H. R. Powell, Supt. of Hort., as follows:—

Weather conditions experienced during the month were in the main hot and dry. The highest rainfall was 123 points in the Donnybrook district. Rainfalls for the other districts

ranged from 10 points at Kalamunda to 114 at Albany.

The beneficial rains that fell during March greatly improved the late varieties of Apples. Yates, prior to these rains were very much restricted in size, and it was thought that they had gone too far even to respond. Fortunately, however, the crop did respond, and in most of the fruit districts they have attained good size. Unfortunately, however, the crop was greatly reduced by the depredations of birds.

The harvesting of Granny Smiths commenced in earnest in April, and fruit of excellent quality and of good size has been forwarded from all districts.

The unfortunate effect of the dry season has been the tendency of Apple and Pear trees in a number of orchards to prematurely come into blossom. Other trees also have been affected and they include Cherries and stone fruit. Fortunately, however, the quantity of trees involved is only small.

Grapes: In the Grape-growing districts the vintage is over and in many respects it can be regarded as a poor one. The lack of rain, shortage of fertilizers, insufficient cultivation, frosts in some districts, etc., have all contributed to this position. Muscat types of wine were disappointing, but some good wines have been produced from the red varieties of Grapes. Sun scorched and chicken berries brought about a good deal of "stuck" wines with very high acidities. Late varieties of eating Grapes were marketed in good condition at a retail price of 6d. lb., which equals £56 per ton.

In the citrus areas non-irrigated orchards have suffered severely through dry growing conditions. There has been a tendency for premature yellowing of the Navels, and it is feared that when normal rains commence to fall a great deal of splitting will take place.

The incidence of disease during the month has not been very severe and there has been a marked falling off in fruit fly infested fruits in the districts adjacent to the metropolitan area.

Increasing attention is being paid by growers to green manure crops, and in many districts New Zealand Blue Lupins have germinated.

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SOUTH AUSTRALIAN NEWS AND NOTES

Official Reports and Notes of the South Australian Fruitgrowers' and Market Gardeners' Association.

SOUTH AUSTRALIAN FRUIT-GROWERS' AND MARKET GARDENERS' ASSOCIATION.

A meeting of the executive of the above Association was held on May 25.

Mr. R. A. Cramond, President of the Association, presided over the meeting, which was attended by the following committeemen:—Messrs. C. H. Ragless, H. G. Robson, J. A. Randell, K. R. James, G. H. Schultz, R. B. Pritchard, W. J. Bishop, L. Winser, H. N. Wicks, C. J. Pitt, J. Turner, J. D. Yeatman, O. Esselbach, W. Nicol, L. J. Wicks, and M. Wicks. Apologies were received from Messrs. A. R. Martin, C. Stanford, and A. G. Strickland.

Correspondence was received and dealt with as follows:—

From Secretary to the Premier stating that amendments had been made to the National Security (Industrial Peace) Regulations, empowering the Minister for Labour and National Service to refer to the Federal Arbitration Court the matter of rates of pay and conditions of employment of persons employed in various industries including fruit and vegetable growing.

From Secretary, South Eastern Potato Growers' Association re affiliation with S.A. Fruit Growers' and Market Gardeners' Association. Moved Mr. Schultz, seconded Mr. Robson, that the correspondence be received. Carried.

Sectional and Branch Reports.

Mr. Bishop reported that business was continuing to be satisfactory, despite the difficulties being experienced during re-building, and a record turnover was expected for the year's operations. The Society intended to install one of the latest and most modern fruit-grading machines in the building, and hoped to get the support of the members in this proposition.

Cherry Section.

Mr. Bishop stated that there was nothing to report in this Section.

Apple and Pear Section.

Mr. Winser reported that they were still experiencing difficulties with growers not wishing to sell.

Celery Section.

Mr. Stuart stated that dissatisfaction was felt by Celery growers at the operation of the Celery Price's Order which required selling by the count. Negotiations were going in for a re-

vision of the order to allow selling by weight. The present order created an anomalous position.

Mr. James stated that growers were satisfied with the price, but wanted sales by weight, not by count.

Citrus Section.

Mr. Esselbach reported that growers would be holding a meeting in the near future to discuss prices.

Potato Section.

Mr. Pitt reported attending Federal Potato Advisory Committee meeting in Sydney, and gave a resume of the business transacted. He also thanked the Association for allowing Mr. Stuart to go to Sydney a few days earlier so that he could attend the Committee Meeting. Mr. Pitt moved: "That a sub-committee from the executive be appointed to meet the South Eastern Potato Growers, and the Onkaparinga Branch to discuss matters in connection with the Potato Industry, also affiliation of the South Eastern Potato Growers with the Association." Seconded W. J. Bishop. Carried.

Mr. Stuart suggested that three members from each body be appointed to comprise the Sub-committee.

It was moved and seconded that three members from each body be appointed and Messrs. C. J. Pitt, W. J. Bishop and C. R. Ridley, were appointed to represent the Association.

Vegetable Section.

Mr. Stuart reported that a provisional committee had been formed and meetings were to be held at Uraidla and Adelaide next week, when permanent committees would be set up.

General Business.

Mr. Pritchard moved: "That the members present have a discussion in reference to the Sub-committee to meet South Eastern Potato Growers." Seconded Mr. Robson. Carried.

Mr. Randell moved: "That the matter of membership fee to be paid by South Eastern members be left in the Sub-committee hands." Seconded Mr. Schultz. Carried.

Resolved that the minutes of previous meetings be not read at monthly meeting, but be taken as read each month following publication in the "Fruit World."

SCHOOL BOYS' POTATO COMPETITION.

Conducted by the Clarendon, S.A., Agricultural Bureau, 1944-45.

During recent months the Clarendon Branch has conducted a Potato Competition among the local schoolboys. Seven boys entered the competition and were each given 1 lb. of seed Potatoes which were all planted on the same day. The Clarendon Branch appointed Messrs. D. R. Spencer and J. Wright, members of the Bureau, to supervise the digging and weighing.

The winner, John Schwerdt, planted his Potatoes on reddish clay soil. This plot had been watered very heavily right through the growing period, and had a liberal dressing of stable manure dug in, and was later

top-dressed with fowl manure. His results were 96½ lb.

Bill Calaby was second. This plot was also heavily watered and manured, and produced a very fine sample of Potatoes; one root dug produced 5½ lb. His results were 94½ lb., very close to the winner.

Jack Richards was third. This was on chocolate soil. Half of the plot was manured with horse manure, and the other half had no manure. This plot was watered only in the early period of growing, and his results were 68 lb.

Barry Mitchell was fourth. This plot was of interest, as Barry had planted his Potatoes in three rows, each with different manure—fowl, cow and horse. His plot produced 55 lb.

The other boys followed:—Roger Trueman with 18 lb., John Smart with 10 lb., Peter Smart with 8 lb.

Details of Results.

Name.	Manure.	Roots	Total
		Dug.	Weight.
		lb.	
John Schwerdt—			
Horse and fowl		37	96½
Bill Calaby—			
Horse		24	94½
Jack Richards—			
Horse		23	68
Barry Mitchell—			
Fowl		6	20
Cow		8	20½
Horse		6	14½
		—	55
Roger Trueman—			
Cow		21	18
John Smart—			
Pig and fowl		20	10
Peter Smart—			
Cow		22	8

Black Spot of Apples

By H. K. Kemp, B.Agr.Sc. (Horticultural Research Officer), and J. A. Beare, B.Agr.Sc. (Horticultural Adviser), South Australia.

Black Spot or Apple Scab (caused by the fungus *Venturia inaequalis*) causes considerable losses to Apple growers in this State, especially in the cooler, wetter parts of the Adelaide Hills where most of our best Apple orchards are situated.

Ascospore Maturity Investigations.

Field trials of control methods and life history studies have been carried out in this State since 1936-37, and results are summarised below.

The life cycle of the fungus may be outlined briefly. Infected leaves are shed to the ground in the Autumn. The fungus then lives as a saprophyte in these dead leaves, growing throughout the entire leaf and not confined to the visible infected portion. In fact, microscopic examination has often shown the fungus to be present in leaves showing no obvious signs of infection.

In Spring large numbers of fruiting bodies (perithecia) are formed within the tissue of the leaves. Each perithecium contains several hundred ascospores, which are ejected forcefully into the air during rain and infect young leaf and flower buds which are bursting at that time.

From these primary infections on leaf and flower tissues a mass of black conidiospores are produced superficially in suitable weather. These conidiospores are washed down over the tree by rain and may set up new infections. Conidiospores may be produced from infected tissue and spread by rain at any time during the growing season when weather conditions are suitable.

It is therefore of great importance that initial infection be reduced to a minimum. This initial infection comes primarily from the air-borne ascospores under South Australian conditions. In some parts of the world, especially in the British Isles, the main sources of primary infection are conidiospores arising from fungus overwintering in dormant bud scales. This phase of the life cycle has not been found in this State.

The critical period for the control

of black spot is therefore during the initial stages of growth, when ascospore discharge occurs, and investigations have been carried out to determine the period over which discharge may be expected if rain occurs.

Methods.

1. Arrangements were made with growers in various Apple districts to forward dead leaves weekly for examination.

The leaves were damped down and perithecia removed with fine needles under a binocular microscope and transferred to a slide for examination. The cover glass was lightly pressed to force out the ascospores.

2. An attempt was made in 1937 and 1938 to measure the actual number of spores in the air in orchards during rain by drawing air through a dinitro-cellulose filter connected to a gas meter. After use the dinitro-cellulose filter was dissolved in alcohol-ether and evaporated, giving a thin film for examination. Unfortunately, very few spores could be identified as the quantity of dust, pollen grains, etc., caught in the filters made counting impossible.

3. In 1940 and 1941 use was made of spore traps, details of construction of which were kindly supplied by Mr. Henrick of the Tasmanian Department of Agriculture.* This method gives data as to when discharges occur and some indication as to their intensity.

Using method 1, the first mature ascospores were found generally at about the end of August. Leaves examined at this stage had a few scattered perithecia containing relatively immature ascospores.

The greatest number of mature ascospores were found through September and early October. By mid October most perithecia were partially decomposed, and such spores as were found were frequently shrivelled and could not be separated easily from the perithecia. Moreover, wetting such leaves generally failed to produce a discharge of spores.

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In spore traps in 1940 very few spores were obtained before the beginning of September. The greatest numbers were found from the middle of September to the first week of October. None were found after mid-October.

In 1941 the discharges were prolonged, especially at Balhannah, where a heavy discharge was recorded on October 27, and at Paracombe, where one spore was found on October 18. At Blackwood the last spores were found on October 8.

This prolongation of the period of ascospore discharge during a wet Spring following a wet summer in 1940-41, agrees with the work of Henrick* in that the period of discharge is generally longer in the wetter climate of Tasmania, and shorter periods

have been recorded in that State in a dry season.

It is noted that ascospore discharge begins when the early flowering varieties (Cleopatra, Jonathan) are in the "green tip" stage and ends approximately when they are in full bloom. The late flowering varieties such as Rome Beauty break into green tip at about the third week in September, at the time of maximum ascospore discharge, and are generally in the pink bud stage when ascospore discharge ceases.

There appears to be considerable biological competition between fungi in dead leaves, as many leaves, even those showing considerable old black spot lesions were found to contain only saprophytic fungi of various types. In spore traps, spores of these saprophytic fungi were more com-

mon than those of *V. inaequalis*. One species producing a peritheciun about twice the size of *V. inaequalis*, and a multiseptate ascospore, was particularly common in all seasons.

Incidence of Black Spot.

The severity of black spot varies considerably from season to season and from district to district.

The drier Apple growing districts (Angaston, Blackwood), generally suffer little from the disease, although severe damage may occur in an unusually wet Spring and Summer, as in 1936-37.

The wettest districts, such as Ashton, Forest Range, and Upper Sturt can expect serious losses in most seasons if efficient control measures are not applied. This is especially so in high altitude gardens subject to longer periods of misty rain and fog.

Control Measures.

In any one season the relative importance of any particular spray in the schedule will depend largely on the incidence of the rainfall.

A spray applied immediately before a rainy period, which is conducive to black spot infection will be much more effective than one applied after such a rainy period.

In a small scale trial in 1937, for example, trees which received only one spray immediately before a week of rainy weather showed 29 per cent. of spot infected fruit, whereas trees which received only one spray, applied after the rainy period, showed up to 80 per cent. infected fruit.

As we are unable to forecast the weather, the aim has been to develop

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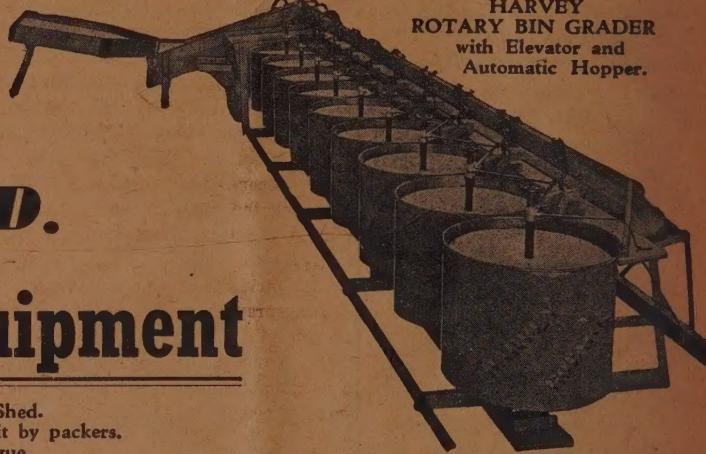
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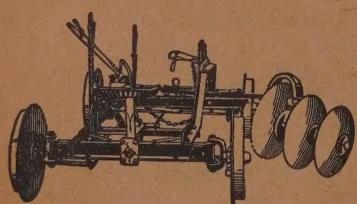
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BLACK SPOT OF APPLES—(Contd.).

a schedule which will give the maximum economic protective cover over the period of ascospore discharge.

The outstanding feature of trials has been the importance of the "green tip" spray of Bordeaux mixture. The spray is applied when the bulk of the buds are at this stage. On most varieties this corresponds approximately with the beginning of the period of ascospore discharge.

Typical results are given in Table I.

Table I.—Results of Trials Showing the Importance of the Green Tip Bordeaux Spray for the Control of Black Spot of Apple.

Spray Schedules.	Percentage of Apples Affected with Black Spot.
Angaston 1936-37 (Cleopatra)—	
Green tip Bordeaux 6-4-40 ..	
Pink bud lime sulphur 1-40 ..	
Petal fall lime sulphur 1-60 ..	16.4
First cover spray lime sulphur 1-70 ..	1.70
Pink bud lime sulphur 1-40 ..	
Petal fall lime sulphur 1-60 ..	56.7
First cover spray lime sulphur 1-70 ..	
Green tip Bordeaux 6-4-40 only ..	38.7
Pink bud lime sulphur 1-40 ..	75.0
Kersbrook 1936-37 (Cleopatra)—	
Green tip Bordeaux 6-4-40 ..	
Pink bud lime sulphur 1-40 ..	8.6
Petal fall lime sulphur 1-60 ..	
Green tip Bordeaux 6-4-40 ..	4.2
Pink bud lime sulphur 1-40 ..	
Pink bud lime sulphur 1-40 ..	47.1
Petal fall lime sulphur 1-60 ..	

Upper Sturt 1937-38 (Variety, Rome Beauty)—

Green tip pink. Petal fall ..	7.7
Pink bud. Petal fall ..	39.0

Paracombe 1941-42 (Variety, Cleopatra)—

Green tip. Petal fall ..	29.8
Petal fall only ..	69.6

Because of the tendency of copper to russet Apples at stages later than the open cluster, lime sulphur is used for sprays applied at the pink bud and later stages.

In general, for most districts and for the early blooming varieties, the following standard schedule has proved fairly satisfactory:

Green tip: Bordeaux 6-4-40.

Pink bud: Lime sulphur 1-40.

Petal fall: Lime sulphur 1-60 to 1-80.

If the Spring has been a wet one, an additional lime sulphur spray may be applied two or three weeks after petal fall.

In this schedule on most varieties the green tip and pink bud sprays are applied respectively about the beginning and middle of the period of ascospore discharge. The petal fall spray is applied after the completion of ascospore discharge, but it serves to check the early spread of infection during a period when humid weather is prevalent.

The inclusion of an additional Bordeaux spray at the open cluster stage of growth has generally given improved control, but except in the wetter districts, it is doubtful if such improvements are sufficiently good to warrant the use of this spray. The use of two Bordeaux sprays (at the green tip and open cluster stages of growth), followed by a lime sulphur spray at petal fall, has not been as

effective generally as the green tip, pink, and petal fall schedule recommended.

For the Rome Beauty variety the position is somewhat different. This variety is later in bud-burst and flowering than most other important varieties, so that the green tip stage corresponds with the time of maximum ascospore discharge. Moreover, there is a tendency for the bud-burst to be very uneven, and the earliest leaf buds may break as much as two weeks before the bulk of the flower clusters are in the green tip stage. If the green tip spray, therefore, is not applied until the bulk of the buds have burst, these early breaking leaf buds will be unprotected for some days during the period of maximum ascospore discharge, and there is a possibility of considerable secondary spread of the disease later in the season. This was clearly illustrated in 1940-41 in a trial dealing with the optimum concentration of Bordeaux mixture. Until shortly before picking time, the fruit was almost completely free from scab, although some spotting was present on leaves, especially on leaders and tips of fruiting arms. Late in the season during picking, however, prolonged wet weather occurred, and there was a considerable late spread of the disease, and the percentage of spot rose from less than 5 per cent. at the first pick to 50 per cent. at the final pick. The mean percentage of spot in each treatment bore little relation to the concentration of the green tip spray, and it appeared that most of the initial infection of leaf shoots occurred before any sprays were applied. Early fruit infection was less than 1 per cent. of the crop in all treatments.

In the following season, 1941-42, schedules including a "pre-green tip" spray, applied when the first leaf buds were bursting, were tested. In this season the late spread was not so evident, but the effect of this pre-green tip spray was marked, as shown in the following table:

Table II. — Results Obtained in a Trial on Rome Beauty Apples at Forest Range in 1941-42.

Spray Schedule.	Percentage Black Spot.
1. Green tip, pink, petal fall ..	9.4
2. Green tip, closed cluster, pink, petal fall ..	7.9
3. Pre-green tip, closed cluster, pink, petal fall ..	4.6
4. Pre-green tip, green tip, pink, petal fall ..	1.7
5. Pre-green tip, green tip, closed cluster, pink, petal fall ..	0.9

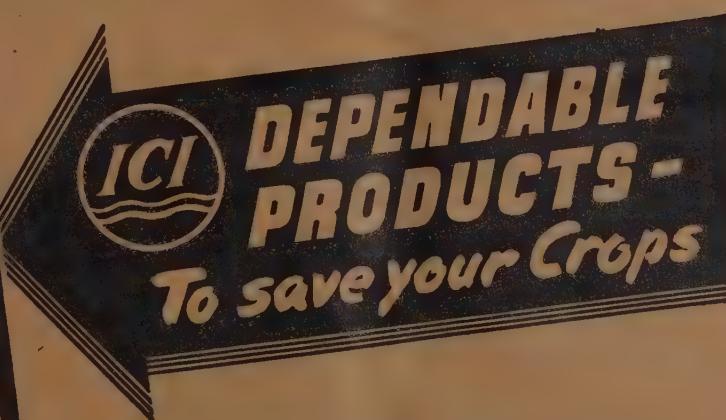
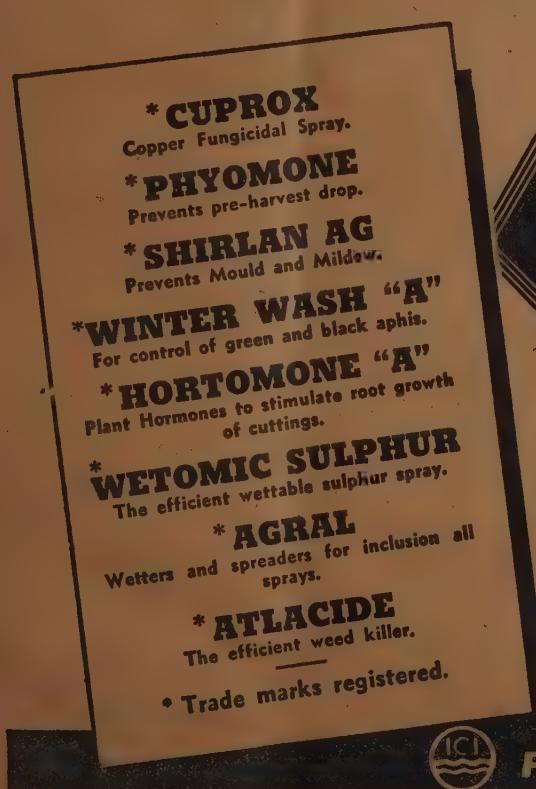
Pre-green tip and green tip sprays—Bordeaux 6-4-40.
Closed cluster—Bordeaux 4-4-40.
Pink—Lime sulphur 1-40.
Petal fall—Lime sulphur 1-80.

For Rome Beauties in wetter districts, therefore, it would appear that two Bordeaux mixture sprays, one applied at the first sign of bud burst, and the second when the bulk of the buds have burst, are desirable.

Concentration of Bordeaux Mixture.

The standard concentration of Bordeaux mixture used in the above trials was 6-4-40, i.e., 6 lb. copper sulphate, 4 lb. lime, to 40 gallons of water. It was suggested that this concentration was unnecessarily high, and that weaker concentrations were equally effective.

In 1939-40 a trial was carried out on Rome Beauty Apples with concentrations of 6-4-40, 6-4-80, and 6-4-120



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PLANT PROTECTION PRODUCTS

of Bordeaux for the green tip, with the pink and petal fall lime sulphur sprays applied at the standard concentration. Results are tabulated in Table III.

Table III.

Concentration of Bordeaux.	Percentage of Black Spot.
6-4-40	41.7
6-4-80	52.8
6-4-120	63.0
6-4-40 at green tip, followed by 4-4-40 at closed cluster	28.5

In this trial there was a reduction in control with reduced concentrations of Bordeaux, but results were inconclusive. Much of the spot recorded was due to late spread of the disease and lesions were so small as to be of little commercial significance.

In the following season, a more extensive trial was carried out, but on this occasion the late spread of the disease from early infections of leaf buds was so great as to almost completely mask results, as shown in Table IV.

Table IV.

Concentration of Bordeaux.	Percentage of Black Spot—	
Early Infection.	Late Infection.	Total.
15-10-100	1.0	22.4
12-9-100	0.6	20.0
9-6-100	0.7	24.3
6-4-100	0.6	34.8
		23.5
		20.6
		25.0
		35.4

As the fruit was harvested in three picks, and the spot increased at each pick from less than 5 per cent. in the first to about 50 per cent. at the last, the mean percentage on each tree depended largely on the proportion of fruit harvested at each pick.

In 1941-42 a trial was carried out at Paracombe on Cleopatra Apples. These trees received only the green tip and petal fall sprays.

Results are shown in Table V.

Table V.—Effect of Concentration of Green Tip Spray at Paracombe in 1941-42.

Concentration of Green Tip Spray.	Percentage Black Spot.
1. 6-4-40	29.8
2. 6-4-60	38.9
3. 6-4-100	53.8
4. Nil	69.6
5. Cuprox 5 lb. per 100 gallons	39.3

Differences between 1 and 2, and between 3 and 4 are not significant. Other differences are significant.

Although these three trials are somewhat inconclusive, it would not appear that any marked reduction in the concentration of Bordeaux mixture below 6-4-40 is desirable.

Substitute for Bordeaux Mixture.

A proprietary copper-containing fungicide (Cuprox) was included in the trial at Paracombe in 1941-42.

This was used at 5 lb. per 100 gallons, at which concentration the amount of copper in the spray solution was rather higher than Bordeaux 6-4-60.

Spot recorded in plots receiving Cuprox amounted to 39.8 per cent., compared with 38.9 per cent. where Bordeaux 6-4-60 was used, and 29.8 per cent. where Bordeaux 6-4-40 was used. None of these differences were statistically significant. It appears, therefore, that Cuprox is approximately equal to Bordeaux for the green tip spray in controlling black spot.

The deposit left by Cuprox was subject to considerably greater weathering by rain than that left by Bordeaux, as shown in Table VI.

Table VI.—Milligrams of Copper on Five 1 in. Circles of Bark from Sprayed Trees.

Cuprox	Bordeaux
Time of Sampling. 5 lb. per 100 gallons.	6-4-40.
Immediately after spraying	0.7
Three weeks after spraying and following heavy rains	0.3
Percentage of copper deposit remaining	42.9
	81.0

Sprays Subsequent to Petal Fall.

The use of lime sulphur with the first cover spray (about two weeks after petal fall) may be of value in checking the early spread of the disease in a wet Spring in the wetter districts, but the value of any subsequent sprays is exceedingly doubtful. Moreover, even at the first cover there is decided risk of damage should very high temperatures occur shortly after the spray is applied, and the damage caused by the lime sulphur is not infrequently greater than that likely to be caused by the black spot fungus. It should be realized that although lime sulphur at this stage may kill the exposed conidiospores and apparently "dry up" the spot, the fungus in the tissues is not killed and will produce another crop of spores should suitable weather occur a week or two later.

If lime sulphur is to be mixed with arsenate of lead in the petal fall or subsequent sprays, it is essential to add three or four pounds of hydrated lime per 100 gallons to prevent the formation of lead sulphide and soluble arsenic, which can cause severe burning.

The inclusion of 6 oz. of bluestone per 100 gallons in all lead arsenate sprays proved completely ineffective in the only trial in which it was used, 32 per cent. of spot being recorded where it was included, and 29 per cent. where it was not.

Importance of Thorough Spraying.

In view of the mode of spread of the disease by water-borne spores, it is essential that all parts of the tree, and especially the tips of branches, be thoroughly wetted by the sprays. Instances have been observed where the tip of a branch has apparently been missed and severely affected Apples and leaves in that position have produced spores which have infected practically all the fruits on the branch, although the remainder of the tree, and other trees sprayed with the same schedule, are reasonably clean.

It should be more generally realized that spraying is a skilled operation, requiring considerable practice, concentration, and attention to detail.

Summary.

1. The period of ascospore maturity and discharge was studied, and was found to be approximately from late August to mid October.

2. Discharges occurred over a shorter period and were less intense in drier districts than in wetter.

3. In spray trials, reasonable control was obtained for most varieties with sprays at the green tip, pink, and petal fall stages.

4. For Rome Beauty Apples in wet districts, three pre-blossom sprays and a petal fall spray were desirable, the first being applied at the first movement of the leaf buds.

5. Lower concentrations than 6-4-40 Bordeaux for the green tip spray did not appear desirable.

Recommendations.

For most districts and for most varieties, the following schedule has been found to be generally effective:

At the green tip stage spray with Bordeaux mixture 6-4-40 (6 lb. bluestone, 4 lb. lime, 40 gallons of water).

At the pink stage, just before the blooms open, spray with lime sulphur, 1 gallon to 40 gallons of water.

At the petal fall stage spray with lime sulphur 1 gallon to 60 or 80 gallons of water.

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In wet districts two Bordeaux sprays applied at the early green tip and closed to open cluster stages may be desirable, and lime sulphur at approximately 1 gallon per 100 gallons of water may be included in the first cover spray two weeks after petal fall if the Spring has been wet.

For late flowering varieties such as Rome Beauty, two Bordeaux sprays, the first applied immediately the first leaf shoots show green, are highly desirable in most seasons in wet districts.

Reference: *Henrik, J. O., 1939, Tas. Jl. Agric., X, 91.

THE BLACK CHERRY APHIS.

The Black Cherry Aphid attacks both the leaves and buds. Entomologists of the Victorian Department of Agriculture point out that the main

damage to the trees is done in the early and late Spring, but the pest may be controlled by spraying the tree during the dormant Winter period.

Over-wintering occurs in the form of a black shiny egg, laid either on or adjacent to the buds. With the first signs of bud movement in the Spring these eggs hatch to young brownish-black aphids, which immediately commence to feed on the buds or the young unfolding leaves, soon producing a distorted appearance of the leaves. Control may be effected by the use of a tar distillate spray at a strength of 1 in 50, when the tree is dormant in the Winter, and certainly not later than the end of the first week in July, otherwise severe burning may result. Be thorough in the spraying, and make certain that no buds are missed.

Mr. S. P. Cornish, Secretary of N.V.F.G., pointed out that in recent years the existing storages had not been filled. Everything depended on and was limited by how the river flowed. The present water right was

insufficient. He himself used 1½ acres normally and required more in a dry year. Some proper safeguard must be given to the men adjacent to the river storages, if water was not to run all over the State.

(Continued on page 14.)

Goulburn Valley News and Notes

(By Our Correspondent.)

IMPROVEMENTS IN IRRIGATION SYSTEM URGED.

PRUNING OPERATIONS in Goulburn Valley orchards are now in full swing and is progressing satisfactorily, although there is an acute shortage of skilled pruners, and some growers are getting the work done by contract. Bud development in both Peaches and Pears is very satisfactory in spite of the dry Summer and lack of sufficient water.

At present we are having bright warm sunny weather with frost at nights, with no immediate prospects of an immediate break in the weather.

The drought still continues in all northern Victoria and the Riverina of N.S.W., and is causing great anxiety as all our irrigation supplies have never been at so low a level as they are to-day.

The position has become so desperate that during the month a deputation from the Northern Victoria Fruit Growers' Association waited on the Minister of Electricity and Water Supply, to discuss these urgent problems.

The following is a report of the deputation.

Deputation to Minister of Water Supply.

A deputation comprising the executive of the Northern Victoria Fruit Growers' Association waited on the minister for Water Supply and Electrical Undertakings (Mr. J. G. B. McDonald). Seeking firstly the immediate formation of a duplicate channel to supply Waranga Basin; and secondly, asking that irrigators of this district (whom they claimed at present received insufficient delivery of water) should be given the option of increasing their water rights, before water is diverted to other parts of the State from the proposed increased storages.

Mr. W. Young, president of the N.U.F.G.A., said that the channel which supplied the Waranga Basin was not nearly big enough: in flood periods water ran to waste. His Association therefore sought as an immediate measure, the duplication of the channel.

Regarding proposed new storages, Mr. Young said that before water was diverted to other districts, the fruit-growers, farmers, and dairymen, and wheat growers, in the Goulburn Val-



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Minister's Reply.
Channel Very Dangerous, says
Minister.

In reply, the Minister said he agreed that the Waranga Channel was inadequate, and that the facilities for repair work were not good. The Commission was now planning a new channel to the Basin which would be commenced as soon as War Organisation of Industry gave priority of men and materials. He undertook to request the Premier to make urgent representation through the Prime Minister for the necessary release of men and materials.

Big Post-war Plans.

Water storages affected the whole of the community vitally, and we had to have courage and vision to develop our country by means of vastly increasing our water conservation, continued Mr. McDonald.

The Government post-war programme included increasing the Eildon Weir to two millions or 2½ millions acre feet.

A survey was being made of the Broken River, and a weir was to be built at Nillahcootie for stock and domestic purposes, and possibly some irrigating.

In other parts of Victoria, land had been acquired on the Loddon River and again at Eppalock, on the Campaspe River. The Government was now re-opening parts of the Rockland Scheme which would help the Wimmera and the Mallee.

Gippsland was to have the Glenmaggie Scheme increased and further developments on the Thompson River.

"There are thousands of acres on both sides of the Goulburn River to be developed yet," said Mr. McDonald, "and this is the proper place for water to be used first."

The Government had allocated 4½ millions to remodelling of the present irrigation system such as improving channel structures to carry a better water supply.

"I am satisfied in my own mind that it is possible to increase the water rights in the whole of the Goulburn system while the Loddon and other rivers will supplement and assist. Only water rights that can be properly given will be allotted," the Minister assured the deputation.

Mr. Fairless indicated that in the scientific distribution of water, a 2½ millions acre feet storage did not mean that this amount of acre feet would be received. Seepage and evaporation must be allowed for and the water right was allotted on the available flow.

Actually, the delivery figures would be about 50 per cent. of the storage.

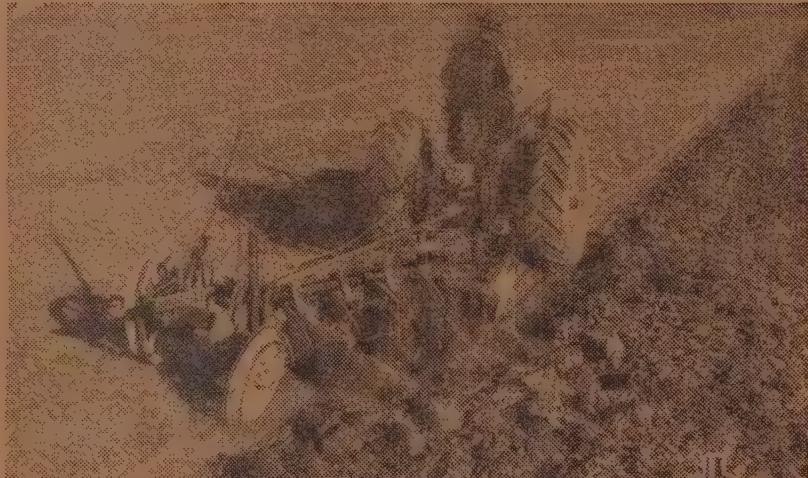
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Queensland News and Notes

SUBSTANTIAL CITRUS PRODUCTION IN NORTH QUEENSLAND — BANANA PRODUCTION AND MARKETING — GASSING PINEAPPLES TO INDUCE EARLY FRUITING — REDUCTION OF CEILING PRICES FOR ORANGES AND MANDARINS REGRETTED.

North Queensland.

The Inkerman Bridge over the Burdekin was very seriously damaged by flood waters in March, and until the end of May, when it reopened for traffic on a modified scale, it was closed.

The Railway Department endeavoured to cope with the traffic via Winston, which added 400 miles to the Northern trip, but found that congestion was such that special arrangements had to be made to use the coastal route. The Department entered into arrangements with the C.O.D. for the organisation to control the loadings from Brisbane on the fruit specials, to unload them at Home Hill, and carry by road across the Burdekin to Ayr, where the consignments were reloaded. This programme, which was satisfactorily handled by the C.O.D., resulted in a considerable saving of time as the delay at the Burdekin was reduced to under 24 hours.

It is not generally realised in the Southern States that North Queensland has quite a substantial production of citrus, mainly Oranges and Mandarins, which could be greatly increased if markets were available. The extent of Northern production was demonstrated early in May when the Cairns and Townsville markets were glutted with Oranges, Mandarins and Lemons. Most of this fruit was marketed green, but was excellent eating. So heavy were the deliveries, that the C.O.D. appealed to the general public to assist by buying cases, the price quoted being only 7/- per case for Oranges and Mandarins in Cairns and slightly higher in Townsville. Large Oranges and Mandarins were retailing freely at 1/6 per dozen and even lower. The main centre of production is Cardwell, roughly mid-way between Cairns and Townsville, but practically all coastal centres contributed to the glut.

Banana production has continued heavy, and full advantage has been taken by Northern growers of the recently opened Banana ripening rooms of the C.O.D. in Cairns. A meeting of Cardwell growers was recently addressed by Major P. J. Savage, Chairman of the C.O.D., and Mr. B. Flewell-Smith, General Manager, who explained steps being taken by the C.O.D. to stimulate the Northern demand for Bananas.

Construction had just commenced on Banana ripening rooms at the C.O.D. Branch at Townsville, and

when both Cairns and Townsville were equipped with modern rooms, it would be possible to offer the Northern public a regular supply of scientifically ripened Bananas grown in the North.

To this end, an advertising fund would be essential, and it was recommended that the Northern growers should request the Banana Sectional Group Committee to apply a special advertising levy of 3d. per case to Northern Bananas. After a full examination of this proposal, it was decided to recommend an advertising levy of 3d. per case to be used solely for publicising North Queensland grown Bananas in the North. This recommendation has since been adopted by the Banana Sectional Group Committee, and steps have been taken for the gazettal of the necessary Regulation.

Following the close of the heavy wet season, large plantings of vegetables were made on the Atherton Tableland, and reports have been received of fair plantings on the coast. Previously, the Northern grower living within the area of the State covered by the Vegetable Control Order, were protected either by contracts for the supply of vegetables at fixed prices or ruling market rates, whichever were the higher, or by the assurance of a Service outlet for the whole of their production. Towards the end of last year the Control Order was lifted, and this has been followed by a discontinuance of contracts. Growers who are planting heavily are thus gambling on the Service demand, and it is felt that there will be bitter disappointments ahead before the industry in the far North adjusts itself to the lower demand.

Bowen, situated approximately 700 miles north of Brisbane, is the main supplier of Tomatoes to Sydney, and the season commenced in May. The wet season was not a heavy one, but it was late, and resulted in lighter plantings than usual for the early crop. There has been an absence of wet weather, and there is every indication of a big mid-season and late crop, particularly as indications such as early blooming of the Mangoes and wattles point to a mild Winter which will favour production.

A number of Pineapple growers have been able to secure sufficient labour for replanting areas which had gone out in recent years through labour shortage.

Following a request from the Bowen Town Council which had been pressed by local Unions to open a municipal market, the C.O.D. opened a retail department at its local branch. It is proposed to extend the present buildings to cope with an expansion of business, and to enable the installation of one or two cool rooms which will prove invaluable in enabling the Bowen district to secure regular supplies of fruit and vegetables during the Summer season, particularly in between arrivals of the fruit specials.

Central Queensland.

Although Central Queensland had relief rains in March, they were inadequate to break the drought which is having serious results. The whole of the country is parched, and vegetable supplies are mainly restricted to growers with irrigation plants.

The citrus crop has been particularly affected and is only 30 per cent. of normal. Cabbages are usually heavy during May, but this year represented a production of only 12 per cent. of last year, which was inflated to meet Service demands.

South Queensland.

Pineapples: The Summer crop of Pineapples for 1945 was completed on April 30—a total of 435,485 cases compared with the final estimate of 468,000 lodged by growers early in the year. In the same period of 1944, 425,222 cases were harvested. The crop this year was of an abnormal nature as the heaviest pickings were from the third week in March to the end of April. This is very unusual as almost invariably the Summer crop is harvested from the third week of February to the end of March. However, this did not cause any difficulties, and the canners were able to process throughout the season without interruption.

An interesting development this Summer was the use of cool storage for fruit carried over during Easter week. The fruit was stored at 33 deg. for five days, and processed very satisfactorily, some canners being of the opinion that the recovery was greater than normal, and that the fruit cut cleaner.

Service needs this year again absorbed the bulk of the cannery output, and so that these orders could be supplied as fully as possible, growers agreed to a diversion of Pineapples from the markets during the normal cannery period of approximately 50 per cent. of the fruit, most of which would have otherwise been consigned to interstate markets. As a result of this, the industry has already pro-

cessed sufficient canned Pineapple to meet half the Service orders placed for 1945. As there is every prospect of a good Winter crop during the early Spring months, there should be no difficulty in fulfilling Service orders in full.

Intermediate Crop: This year there has been a considerable increase in the practice of gassing Pineapples to induce early fruit. This is merely a process of applying acetylene, i.e., carbide and water to mature plants in the month of September and October, which has the result of forcing the plants into flower two or three months ahead of the normal time. Provided only mature plants are selected, the crop produced is of excellent quality, consisting of large, well-shaped fruit. However, if undeveloped plants are treated, small fruit with extremely large tops result, so that there is a considerable loss in yield, and some experience is necessary before individual growers apply carbide on a large scale. As a result of the heavy gassing this season it is estimated that there will be 100,000 cases more available in the period May 1 to July 31 than usual.

One of the main benefits of this treatment is that it is possible to bring a considerable portion of the Winter crop forward two or three months, and avoid heavy losses from Blackheart, which would appear in the fruit if it were allowed to mature at its normal time. This is particularly valuable with the Rough and Ripley varieties which are produced solely for market, as this variety is very susceptible to Blackheart during the months July to September.

An interesting development in Pineapple culture is the use of bulldozers to clear virgin land for Pineapples. It is anticipated that some 400 acres will be cleared by this means for this season's planting by a large contracting firm which has, among its other activities, been responsible for the open cut coal mine at Blair Athol, Queensland, and is also engaged in coal mining by mechanical means at Muswelbrook.

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Vegetable Grower

VEGETABLE CONTRACTS FOR 1946.

Vegetable growers who have been growing vegetables under contract for the Commonwealth Food Control naturally are anxious to know of the 1946 requirements and as the Victorian Department of Agriculture has now received the vegetable target for that year, the Minister of Agriculture, Mr. Martin, made the figures available.

The demand for Carrots has been considerably reduced, and some 10,000 tons only are needed. Of the remaining vegetables, 8,000 tons of Beetroot, a little over 20,000 tons of Cabbages, 365 tons of Parsnips, 926 tons of Swedes, and 525 tons of White Turnips are to be grown under contract for delivery in 1946. Over 66,000 tons of Tomatoes are required from Victoria.

As the dehydration plant at Warrnambool will not be processing vegetables, other than Onions and Potatoes, the only contracts to be let in the Western District will be for Swedes. The Parsnips and White Turnips are to be produced in the Metropolitan area.

The policy has been adopted of producing vegetables near to where they are to be processed and in pursuance of this policy most of the contracts will be made in the Koo-wee-rup, East Gippsland and Metropolitan areas.

Growers desiring vegetable contracts should apply on the special

form provided by Commonwealth Food Control. These forms should then be forwarded to the officers in charge of the various vegetable districts, i.e., East Gippsland, Mr. D. M. McAlpin, 198 Main-street, Bairnsdale; Koo-wee-rup, Mr. A. C. Doery, Wilson-street, Berwick; Metropolitan, Mr. T. M. Farmilo, Stud-road, Baywater.

WEEDS IN ONION CROPS.

Control by Spraying.

A NEW PREPARATION for destroying weeds among Onion crops has been developed in N.S.W.

Onion production in U.S.A. has been facilitated in recent years by the use of a selective weedicide prepared from a chemical known as sodium dinitro ortho cresylate. In California the spraying of Onion crops with this product is now a standard practice. The chemical is now being manufactured by a Sydney firm, and field trials with this local preparation have been conducted by the N.S.W. Dept. of Agric. in various parts of the State. As a result of these tests, states the Division of Plant Industry of the Department, this weedicide can now be recommended for use commercially to control small, broad-leaved weeds in young Onion crops.

The selective action of the weedicide results from the different structure of foliage of the plants to which

it is applied, an action assisted by the fact that the growing point of Onions is protected by the leaf bases, whereas in most weeds it is exposed. The spray will run off the smooth waxy surface of upright Onion leaves and grasses, whereas plants with exposed broad leaf surfaces or a covering of hairs are easily wetted and hold relatively large amounts of spray. Therefore, whilst wild oats and other grasses growing as weeds in Onion crops are not controlled, weeds such as sorrel, field mallow, shepherd's purse, stagger weed, cape weed, chickweed, etc., are destroyed. The best time to spray weeds is when they are very young and tender, as some resistance to the chemical is acquired with increasing growth.

Certain conditions have to be observed with regard to dilution and method of application, as damage can be caused, especially on light soils, when rain or irrigation follows soon after spraying.

The locally manufactured preparation with which the Department's tests were conducted is being marketed under the proprietary name of Dinoc.

CEILING PRICES FOR TOMATOES.

The Commonwealth Prices Commissioner for sales in Victoria of fruit and vegetables:—

Tomatoes: As from May 21, 1945, the maximum prices are:—Wholesale, 8d. per lb., 82/- per bushel. Retail, Cost into store plus margin of not more than 3d. lb. Retail price must not exceed 11d. lb.

NEW POTATO DIGGER AND GRADER.

Invention by S. Aust. Airman.

Sometimes an airman "comes down to earth" in more ways than one. However, L.A.C. Sly, a young Sth. Aust. airman, who was formerly a railway fitter, has "come to earth" and invented a new Potato digger and grader which has created much favourable attention. This machine is regarded by Potato Control Officers as the most valuable contribution to cheaper production.

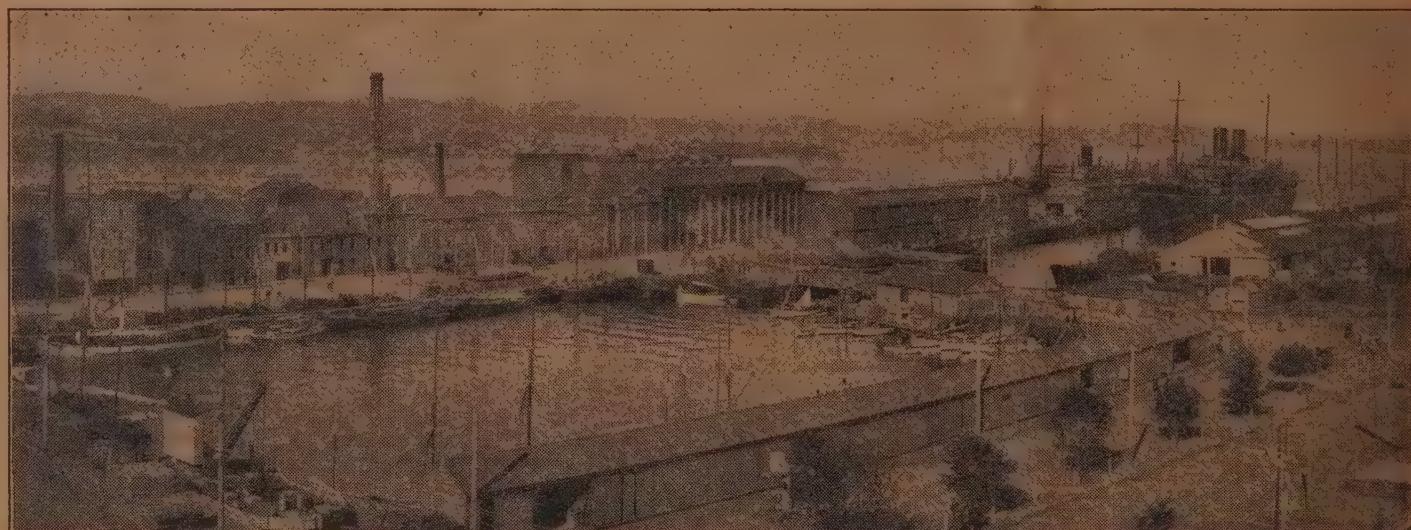
After tests by the Commonwealth Machinery Board and the Army Inventions Board, L.A.C. Sly was given six months' leave of absence to complete his plans.

The machine is stated to dig, bag and grade Potatoes in one operation, with a capacity of five acres a day. It is further stated that when drawn by a tractor, with one man driving and two men handling it, superiority over other machines is shown by their requirements of 15 to 20 men to get the same results.

Because of simplicity of construction it is expected the cost of the machine will not exceed £200.

STRINGLESS BEAN.

Considerable interest has been created in N.S.W. through the successful cultivation of stringless Beans. The variety was introduced into Australia through shortage of other seed. A favourable report regarding the



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stringless variety in the Camden district was recently made by the district inspector of the Dept. of Agric., Mr. H. Woodward.

The Director of Vegetable production, Mr. A. Wenholz, stated that the present position, in which growers would have to grow this variety or nothing, might prove a blessing in disguise, as housewives would probably discover the labour-saving qualities of this type of Bean. Growers would thus be compensated for lower yields by higher prices.

Fruitgrowing in England

Some Striking Figures.

Popularity of C.O.P. and Bramley Apples.

THIS year about 64,000 census forms were sent out to fruit-growers in England and Wales by the Ministry of Agriculture. The object was to find out the numbers, varieties and age of fruit trees and of the areas under soft fruit on all commercial holdings. Growers made a real effort to get their forms completed on time. The results obtained have now been analysed, and some interesting figures have been brought to light.

Trees of dessert and cooking Apples number over 15 millions, or 3 million more than shown by the census of 1925. Five million of these trees are under nine years old, and indication of the healthy condition in that section of the fruit-growing industry, for it is these young trees that will produce the future crops.

The popularity of Cox's Orange Pippin is confirmed by the fact that out of 9 million dessert Apple trees, 4½ million are Cox's. Worcester Pearmain come next with 1½ million.

Bramley's Seedling heads the list of cooking varieties with 2½ million trees out of a total of over 6 millions.

It would appear from the returns of trees of cooking Apples that growers have concluded that there are sufficient trees for market requirements in the future, for of all the cooking Apple trees, nearly 5½ million (of which nearly 2 million are Bramleys) are over 9 years old.

Cordons—2,000 Trees per Acre.

Bare statistics can, however, be misleading, and it must be remembered that Bramley's Seedling trees are large and thus each is capable of producing many bushels of fruit. Over a million are planted under 100 to the acre and about 950,000 at 100 to 500 per acre. Three million Cox's, however, are planted at over 500 per acre, and 1½ million at between 100 and 500 per acre. This is due to the large proportion of Cordons which are planted at an average of as much as 2,000 to the acre.

Dessert Apples Now Favoured.

There is no doubt that fruit growers' policy has undergone a great change in recent years, and comparison of the latest information with the results of a census taken in Kent 20 years ago, indicate the trend. In that census Bramley's Seedling was grown on over 80 per cent. of the area surveyed, consisting of 2,500 acres. Worcester Pearmain covered 30 per cent., and Cox's 6 per cent. This shows that the planting pro-

gramme twenty years ago favoured the cooking varieties. The 1944 figures indicate a complete change round in planting policy.

Soft Fruits.

The 1944 census reveals that the acreage of soft fruit in England and Wales of 33½ thousand acres is only about one half of the acreage of 20 years ago, the greatest decline being in Strawberries, Raspberries and Black Currants.

While war conditions can be held responsible for some of this decrease in acreage, there is no doubt that poor

stocks of all the soft fruits mentioned have been responsible for low yields and poor returns. Provided growers commence with certified "virus free" stocks, yields and returns would improve. The business of producing soft fruits in this country should be a profitable undertaking, for the home supply is totally insufficient to meet the demand.

It was recently announced that fruit growers may now apply to County War Agricultural Executive Committees for permission to plant

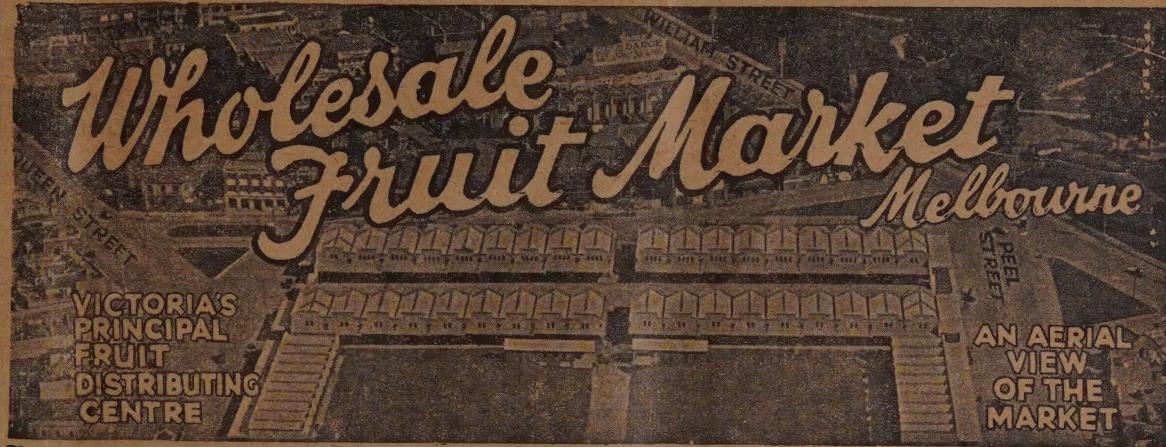
new fruit acreage irrespective of their 1939 acreage under fruit. — Extract from "Travers' Circular," January 13, 1945.

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Market Notes and Prices

NEW SOUTH WALES.

Sydney, 23/5/45.

The State Marketing Bureau reports as follows:—

Fruit.

The market for Apples had a firmer trend. Supplies from local centres were limited, only small quantities of Delicious and Granny Smith being received, and fancy grades of both varieties realised the ceiling level of 27/- per bushel. Tasmanian Jonathans were available at from 16/- to 20/-; Delicious of 2½ inch, and larger, sold at the maximum of 27/-, while 2½ inch packs were offered at 16/-. Granny Smiths realised from 20/- to 27/-. Other Tasmanian varieties included Crofton, Scarlet Pearmain, Geeveston Fanny and Sturmer, for which up to 22/- was obtained. Cleopatras realised 25/- for the best trade sizes. Further Victorian consignments came to hand and comprised Jonathans, Granny Smiths, Rome Beauties, London Pippins, Delicious, and a few other varieties. Firm rates ruled for Jonathans, Granny Smiths, Delicious and Rome Beauties.

Demand for Pears was somewhat restricted and values showed an easier trend. Local Packham's and Winter Coles sold up to 26/-, with an occasional sale slightly higher. Small Winter Coles were slow to clear at rates ranging from 10/- to 20/-. There was a fall in the price of Victorian Beurre Boscs, best lines being offered at 18/- per bushel. Rates for Victorian Packham's Triumph showed only slight variations. Choice Josephines realised up to 24/-. Rates for Tasmanian Winter Cole and Winter

Nelis were 18/- to 25/-, and for Glou Morceau 16/- to 22/- per case.

Current quotations were:—

Apples: N.S.W.: Granny Smith, fancy grade 27/-; Delicious 27/- (nominal); Victorian: Granny Smith, fancy grade 27/-, Jonathan 18/- to 26/-, few 27/-; Interstate: Rome Beauty 18/- to 26/-; Tasmanian: Jonathan 16/- to 20/-, Delicious 16/- to 27/-, Granny Smith 20/- to 27/-, Geeveston Fanny 18/- to 22/-, Scarlet Pearmain 18/- to 22/-, Cleopatra 18/- to 25/-, Crofton 16/- to 27/-, Sturmer 20/- to 22/-; Pears—New South Wales: Packham's Triumph 20/- to 26/-, Winter Cole 20/- to 26/-, very small sizes from 10/-; Victorian: Packham's Triumph 20/- to 26/-, ripe packs lower, Josephine 18/- to 24/-, Beurre Bosc 14/- to 18/-; Tasmanian: Winter Cole and Winter Nelis 18/- to 25/-, Glou Morceau 16/- to 22/-; Oranges—Navel: Coastal 12/6 to 16/-, Lemons: Coastal 8/- to 20/-, Queensland 20/-; Mandarins: Emperor 20/- to 25/- per bush. case. Grapes: Cornichon 14/- to 18/-, few higher, White (other than Muscat) 12/- to 20/-, few higher. Passionfruit 18/- to 30/-, inferior lower, few higher. Custard Apples, 8/- to 14/-; Avocados, 10/- to 20/- per half case. Bananas, 7d. per lb. (weight 80 to 96 lb. per case). Papaws, 15/- to 30/-, specials 35/-. Pineapples, 16/- to 21/3 per tropical case. Honey Dews, 7/- to 12/- per crate.

Vegetables.

Peas, 8/- to 20/-, few specials higher, inferior from 4/-; Beans 1/- to 7/-, choice 10/- to 12/-, some unsaleable, per bushel; Cabbages 2/- to 8/-, few 10/-; Cauliflowers 8/- to 20/-, choice 24/-, selected large

"heads" to 30/- per dozen; Lettuce 16/- to 22/-, few higher, per case; Carrots 3/- to 5/- per dozen bunches, 16/- to 20/-, broken bagged lots higher, per cwt.; Parsnips 4/- to 7/- per dozen bunches, 16/- to 24/-, choice washed to 28/- per cwt; White Turnips 2/- to 4/-; Rhubarb 4/- to 6/-, few higher; Spinach 2/- to 4/-; Celery (Local) 6/- to 12/-; Eschalots 3/-; Mint 3/- to 6/-; Parsley 15/- to 24/-; Beetroot 2/- to 4/- per dozen bunches; Tomatoes (Local) 8/- to 18/-, small and inferior lower, (Inland) 6/- to 14/-, few 16/-, inferior lower, per half case; Potatoes, 1st Grade 7/10½; Onions (Victorian), Brown 18/- to 21/-; Swedes 9/- to 12/-; Pumpkins 8/- to 12/-; Sweet Potatoes 12/- to 14/-, broken bagged lots higher, per cwt; Brussels Sprouts (Local) 8/- to 12/-, (Victorian) 12/- to 16/- per box (approx. 12 lb.); Mushrooms (cultivated) 3/- to 4/-, few higher, per lb.

VICTORIA.

Melbourne, 1/6/45.

Vegetables.

Beans, French, 20/- to 45/- 50 lb., few to 50/-; Beetroot, 6d. to 8d. doz., max. 17/- cwt.; Beet, Silver, 3/- to 4/- doz. bunches; Cabbages, 4/- to 8/- doz.; Carrots, 2/- to 3/- doz. bunches, max. 21/- cwt. without tops, 16/- cwt. with tops; Cauliflowers, 4/- to 9/- doz., few to 10/-; Celery, 4/- to 8/- doz.; do., Adelaide, 15/- to 24/- dble. case; Cucumbers, 2/- to 3/- doz.; Garlic, 1/8 to 1/6 lb.; Horseradish, 1/- to 1/3 bundle; Leek, 3/- to 4/6 doz. bunches; Lettuce, 8/- to 12/- case; Mint, 2/- to 3/- doz. bunches; Melons, Citron, 4/- to 12/- doz.; Mushrooms, 20/- to 40/- case; Onions, green, 2/- to 3/- doz. bunches; Parsley, 2/- to 3/- doz.; Parsnips, 3/- to 4/6 do., max. 23/- cwt. without tops, 18/- cwt. with tops;

SOUTH AUSTRALIA.

Adelaide, 30/5/45.

The S.A. Fruitgrowers' and Market Gardeners' Association report as follows:—

Vegetables.

Beans (French), 10/- firm, doz. lb.; Beetroot, 2/6 doz. bchs.; Brussels Sprouts, 8/- doz. lb.; Cabbages, large 8/-, medium 6/-, small 4/-, Savoy 4/-, 7/- doz.; Carrots, 4/- doz. bchs.; Cauliflowers, large 12/- firm, medium 9/-, small 6/- doz.; Celery, 6/- doz. heads; Lettuces, 3/- doz.; Leeks, 4/- doz.; Onions, Brown, 12/-, 14/- cwt.; Parsnips, 4/- doz. bchs.; Peas, 16/- bush.; Potatoes, new, 8/14 cwt.; Rhubarb, Cherry, 3/-, short, doz. lb.; Tomatoes, firsts 14/- 1 case; Trombones, 9/4 cwt.; Turnips, 2/6 doz. bchs.; Swede, 3/- doz. bchs.; Triambles, 9/4 cwt.

Fruit.

Quinces, 8/-, 9/- case; Bananas, ripe, 8d. per lb.; Pineapples, 5½d. per lb.; Passionfruit, 1/6, 3/- doz.; Melons, Pie, 9/4 cwt.

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Poultry Notes

SCALY-LEG OF POULTRY.

The scaly-leg mite is the commonest itch mite affecting poultry in Victoria. It usually attacks first in the clefts between the toes, and spreads forward and upward until the whole foot and leg become affected.

Entomologists of the Victorian Department of Agriculture point out that at first there is a slight roughening of the surface of the legs, but the continued irritation by the mites causes the formation of a spongy or powdery substance under the scales, which become raised and easily detachable. Occasionally, the comb and wattles may be attacked.

The trouble may be readily transmitted from bird to bird.

An effective treatment is to dip the feet and shanks of the bird in crude oil, and scrub thoroughly with a hard brush. Care should be taken not to get the oil on the upper part of the legs or on the feathers. Dipping is best carried out in the morning to allow the oil to drain off before the birds go to roost. Usually one application is sufficient, although in bad cases it may be necessary to repeat the treatment in a month's time.

Washing the legs in soap and water, removing loose scales with a brush, and applying a mixture of lard 9 parts and sulphur 1 part, is also an effective treatment. Disinfection of the perches by spraying with crude oil is recommended as a preventive.

PIGS & PORK

Weight of Age Baconers.

Recently there came to the notice of Mr. L. A. Downey, Pig Expert of the Victorian Department of Agriculture, two records of weight for age in baconers, comparison of which shows the need for keeping records of pig production.

In one instance, the record concerned a line of baconers which had just been sold. They had an average carcass weight of 185 lb., so that their live weight would have been in the vicinity of 250 lb. at the farm. These pigs were ten months old.

The other case was a line of baconers nearly ready for marketing. They were weighed weekly during their last few weeks on the farm, and when seven months old averaged 212 lb. alive, having gained an average of 11 lb. each during the previous week. The weight for age of these pigs is by no means an outstanding performance, but it does serve for comparison with the ten months old, 250 lb. pigs.

The important point of this story is that through having kept records of his pigs' ages and weights, and then compared them with other performances, the owner of the ten months' old pigs made enquiries, and is now taking action which should help him to produce pigs of the same weight in two to three months less time with a substantial saving of food, equipment and labour.

Abnormally slow growth may be due to one or more of many factors, such as the use of small-type breed-

ing stock, a diet inadequate in quantity and quality, and infection.

To reduce such waste in the pig industry, it is necessary for farmers to keep written records of birth dates, marketing dates, and weights of their pigs. If these records of performance are not at least equal to a standard weight for age of 1 lb. live-weight for each day of age in heavy baconers, the reason should be sought, and if it is not obvious to the farmer, he may obtain the advice of the Victorian Department of Agriculture, Melbourne, C.2.

FARM MANURE.

ARMYARD manure is a valuable commodity that should not be allowed to go to waste, especially in view of the present shortage of artificial manures.

Mr. W. D. Andrews, Dept. of Agric., Victoria, states that as a fertilizer it is superior to the artificial products because it contains, in addition to the several mineral elements necessary for plant food, organic or vegetable matter that breaks down in the soil to form humus. This latter material serves the dual purpose of maintaining the soil in a good physical condition and providing food for the millions of micro-organisms essential for fertility in a soil.

A large part of the plant food in the herbage eaten by farm animals is voided in the dung and the urine, and the return of this excreta to the soil is most necessary if the fertility of the soil is not to be exploited. Of the two forms of excreta, weight for weight, the urine is the more valuable fertilizer, and from the point of view of preventing potash deficiency, it is the more important. However, best results will follow if both the liquid and the solid matter are used together. Most farmers do not make any provision for collecting the urine that runs away from the milking shed, while the dung is usually carted out and dumped on to a heap, where it is allowed to waste away.

Probably the most satisfactory method of conserving the mineral matter in farmyard manure is to allow the urine and washings from the milking shed to drain into an underground tank, and to collect and deposit the dung from the yards into a pit, from which the drainage will also run into the tank. The distribution of the liquid can be carried out with a liquid manure spreader in the form of a portable tank.

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TELEGRAPHIC ADDRESS: APPLES, BRISBANE.

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ESTABLISHED 1912.



"FRUIT WORLD ANNUAL."

Appreciation has been expressed from many quarters regarding the 1945 Annual of the "Fruit World and Market Gardener."

In addition to the chart showing control methods for the major insect pests and fungus diseases, there are articles and statistics relative to the fresh, canned and dried fruit industries, also practical articles on various phases of fruit culture.

The article on present and post-war conditions affecting the fruit industry has received special commendation.

Another special feature is the inclusion of the names of the officers in the Departments of Agriculture in Australia and New Zealand. How-

ever, an error occurred on page 64, where, under the heading of Queensland the names of "Country Potato Inspectors" were included. This item should have appeared under the heading "New South Wales" as the names given are members of N.S.W. Division of Horticulture.

"A permanent system of security can be made effective and acceptable only if it has a foundation of economic justice. Indeed, real stability in the post-war years can be achieved only by building a way of life so that the various nations and peoples can live together in prosperity and security."—Dr. Evatt, Federal Attorney-General.

SPECIAL NOTICE TO FRUITGROWERS

In response to numerous requests from growers for information as to who are members of the
VICTORIAN CHAMBER OF FRUIT & VEGETABLE INDUSTRIES,

the following list is given. All are members of the above Association, and are registered firms carrying on business in the WHOLESALE FRUIT MARKET, MELBOURNE. (All Members under Fidelity Bond)

Stand Numbers are as indicated in Parentheses.

T. STOTT & SONS PTY. LTD. (26-36).
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DAVID SMITH PTY. LTD. (3).
SILBERT SHARP & DAVIES PTY. LTD. (17).
WATKINS FRUIT COMPANY PTY. LTD. (5).
G. WOOLF & SONS (29-30).
E. CORNISH & SONS (5).
J. HYMAN & SON (51).
HERBERT WILSON PTY. LTD. (10).

FRANK BOOTH & SONS PTY. LTD. (16).
GEO. LISTER PTY. LTD. (12).
TIM YOUNG & CO. PTY. LTD. (18).
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YEE HOE LOONG & CO. (32).
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D. MENTIPLAY & CO. PTY. LTD. (27).
WING YOUNG & CO. (38).
E. G. KING PTY. LTD. (2).
REGAN & KENNY (Successors to Wm. Sweeney) (33).
INTERNATIONAL FRUIT & MERCANTILE CO. (6).
D. S. LUCAS & CO. (9).
PRODUCERS' CO-OP. DISTRIBUTING SOCIETY LTD. (7).
R. A. WING & CO. (37).
YOUNG SANG (45).

Office: 21 Wholesale Fruit Market, Queen St., Melbourne.
Phone: F 4866.

Correspondence is invited by the Association.

BANANAS

BLACK MARKETING DEPLORED.

There has been intense competition for all Banana supplies, both in the case and in the bunch. With shortened supplies from N.S.W., Sydney and Melbourne, merchants commenced operations in Queensland where most of the local production was being absorbed by Brisbane. Frequent allegations are being made of blackmarket prices being paid growers, and during the recent trouble with the retail trade in Sydney, a charge was made that some merchants were charging retailers blackmarket prices. This confirms the opinion in Queensland. This is a serious development, as the retailers of Sydney have threatened a general boycott of Bananas which could have disastrous results on the industry as the fruit cannot be held on the plantation or cold stored like Apples. Growers accepting blackmarket rates are doing a serious disservice to the industry.

Construction is well advanced of a set of Tomato ripening rooms for the Services which will relieve the C.O.D. Banana plant which for some years had devoted five or six rooms to Service ripening. This space is at times urgently required for Banana ripening.

Stanthorpe.

The Stanthorpe season drew to a close during May. Heavy losses from frosts had resulted in big plantings of vegetables, particularly Beans and Tomatoes. Growers whose orchards escaped serious frost losses had an excellent season. Generally, Bean and Tomato prices were low. In the 1942/43 season 15,426 tons were forwarded on the C.O.D. fruit train from Stanthorpe to Brisbane. In 1943/44 the quantity was 25,328 tons, and in 1944/45 18,688 tons.

Secondhand Cases: Twelve to eighteen months ago there was a

serious shortage of secondhand cases in Queensland, but this position has now changed and dealers operating under the Secondhand Fruit Cases Act have such heavy stocks on hand that retailers are complaining that their empties are not being picked up. Efforts have been made by the Secondhand Fruit Cases Committee to secure transport to move portion of the surplus through to Sydney, but transport was refused.

The surplus is puzzling as dealers are handling just as many cases as twelve months ago. The trouble is probably an aftermath of the record harvest of Summer fruits last year, coupled with the fact that a much bigger proportion of market deliveries is now finding its way to consumers and the cases are available for redistribution, whereas only a small proportion of Army deliveries find their way back to trade channels.

Citrus.

Considerable disappointment has been expressed by all sections of the industry at the reduction in the Orange ceiling of 2/- per case. All

districts except Gayndah and the far north report particularly light crops, and no justification can be seen in reducing the ceiling under such circumstances.

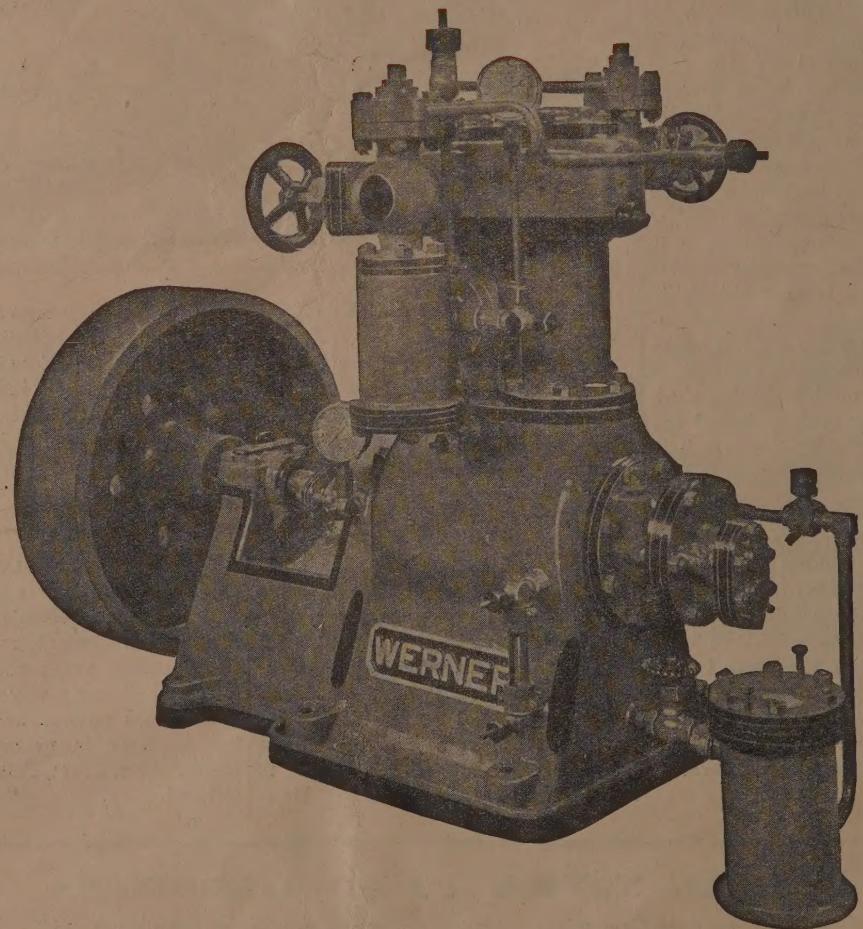
The main Mandarin districts are upset with the Mandarin ceiling, particularly those districts concentrating on large Mandarins such as the Ellendale. Young orchards of this variety can average 84 to the case, which reduces the ceiling for such orchards to 14/- per case.

All Strawberry centres report big increases in plantings compared with last year, and it is anticipated that there will not be the same strong market demand as last year.

General concern has been expressed by vegetable growers at the Federal Government's announcement of an increased target for Queensland for 1946 of over 4,000 acres. Queensland lacks both canning and dehydration facilities, and the announcement of an increased acreage target for next year conflicts with the known decrease in Service demands.

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SOUTH AUSTRALIAN DRIED FRUITS BOARD.

The South Australian Board had a busy session at its meeting held on May 28, when a number of important matters were dealt with. First draft of the Sixteenth Report of the Board was submitted and after discussion, it was agreed to defer further consideration to the next meeting.

The Board's financial statement for the year ended February 28, 1945, was adopted.

The Chairman (Mr. G. A. W. Pope) reported that he, with the Secretary (Mr. W. N. Twiss) had tendered evidence to the Parliamentary Committee on Land Settlement on May 15, 1945, a copy of the evidence was read for the information of members.

In the matter of the proposal of the Victorian Board to hold an Interstate Conference of the Boards during the present year, it was agreed that the Board approve of the suggestion and recommend that the Conference be held in Melbourne about October next. A letter from the Western Australian Board was read, favoring the proposal and making certain suggestions to the Consultative Committee in regard to the representation of Western Australian grower-members.

A memorandum of the Secretary dealing with the Board's proportion of the cost of inspection of packing houses for the year 1943, was considered and the Secretary was directed to take the matter up with the Department of Commerce and Agriculture.

Minutes of meeting of Consultative Committee held on March 31, 1945, were laid on the table and noted.

A full report by the Chairman of the Consultative Committee (Mr. Parker J. Moloney) on his recent visit to Western Australia, accompanied by the Secretary (Mr. Twiss) to confer with the Western Australian Board was presented and noted with interest.

As Shakespeare said:

'All the world's a stage.'

As the income-tax man said:

'And all the men and women merely payers.'